

REMARKS/ARGUMENTS

I. Status of Claims

Prior to this Amendment, claims 1-14 were pending with claims 1 and 9 being independent. By this Amendment, claims 1 and 9 have been amended.

II. Rejections under 35 U.S.C. §103(a)

Claims 1-14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Leporini (U.S. Pub. No. 2003/0110382 – hereinafter Leporini) in view of Martin (U.S. Patent No. 7,174,512 – hereinafter Martin). Applicants respectfully traverse this rejection.

Claim 1

Claim 1 recites a hybrid digital broadcasting receiver for reproducing digital multimedia data, comprising:

“a broadcast receiving module comprising:

a receiving section for receiving and demodulating a digital broadcasting data stream which includes a multiplexed and transmitted plurality of compressively encoded and scrambled programs;

a first demultiplexer for demultiplexing said demodulated digital broadcasting data stream, and selecting and extracting digital broadcasting data corresponding to a program selected by a user;

a conditional access section for detecting conditional access information and decrypting said selected digital broadcasting data using said detected information;

a multimedia module for supplying a digital multimedia data stream that is not decrypted; and

a decoder module comprising:

a second demultiplexer in electrical communication with said multimedia module for receiving said digital multimedia data stream and for demultiplexing the digital multimedia data stream which includes a multiplexed plurality of compressively encoded digital multimedia data; and

a decoding section for decoding digital broadcasting data output from said broadcast receiving module and digital multimedia data output from said second demultiplexer,

wherein the digital broadcasting data is inputted to the decoding section via the conditional access section from the first demultiplexer and the digital multimedia data is inputted to the decoding section from the second demultiplexer.” (emphasis added)

I.

Before analyzing the substantive elements recited in claim 1, it is believed to be beneficial to first discuss the meaning of the term “module” as recited in claim 1.

Briefly, in the context of an apparatus, such as the claimed hybrid digital broadcasting receiver, those skilled in the art readily understand that a “module” refers to a *self-contained unit* that can be used in combination with other component(s) or unit(s).

As explained in the specification of the present application, one problem of the conventional digital media broadcasting (DMB) receiver is that its decoder is confined within the same DMB receiver such that the decoder cannot do the decoding independently of the conditional access section of the same DMB receiver. As a result, if a mobile terminal wants to incorporate a conventional DMB receiver, the mobile terminal must equip an additional decoder within its small size and consume additional power associated with the additional decoder, in order to decode digital media data from sources other than the conventional DBM receiver.

The decoder module as claimed, *as a self-contained unit*, is instrumental in allowing one decoding section to decode both decrypted digital broadcasting data outputted from a broadcast receiving module (via a conditional access section) and non-decrypted digital multimedia data outputted from a separate multimedia module.

Specifically, the decoder module as claimed comprises:

- *a second demultiplexer* in electrical communication with said multimedia module for receiving said digital multimedia data stream and for demultiplexing the digital multimedia data stream which includes a multiplexed plurality of compressively encoded digital multimedia data; and
- a decoding section for decoding digital broadcasting data output from said broadcast receiving module and digital multimedia data output from said second demultiplexer;
- wherein the digital broadcasting data is inputted to the decoding section via the conditional access section from the first demultiplexer and the digital multimedia data is inputted to the decoding section from the second demultiplexer.

The cited Leporini reference, however, does not teach or suggest the decoder module as claimed. The only modules, or *self-contained units*, that Leporini discloses are:

- the receiver/decoder 2000; and
- each individual component disposed within the receiver/decoder 2000, such as descrambler/demux/remux 2010, MPEG video decoder 2028, hard disc 2100 and smart card reader 2052, and etc.

None of those modules, however, is disclosed as comprising the second demultiplexer as claimed and the decoding section as claimed, as is the case for the decoder module as claimed.

The Examiner, nonetheless, cites the receiver/decoder 2000 of Fig. 4 as disclosing the decoder module as claimed. Applicants respectfully disagree with the Examiner's assessment.

Specifically, the receiver/decoder 2000 of Fig. 4 *has already been cited* for allegedly disclosing the broadcast receiving module as claimed. On the other hand, the decoder module as claimed, by definition, is *a separate self-contained unit*, from the

broadcast receiving module as claimed. Accordingly, the same receiver/decoder 2000 cannot be again cited for the decoder module as claimed, since the same receiver/decoder 2000 cannot be simultaneously disclosing two separate and different modules, which, by definition, are two separate and different self-contained units.

In other words, the Examiner errs in failing to give the correct meaning to the term “module” as applicable to both the broadcast receiving module as claimed and the decoder module as claimed.

Therefore, based on the apparent modularity disclosed in Leporini, Leporini simply does not teach or suggest the decoder module as claimed. On the other hand, the cited Martin reference does not cure this deficiency of Leporini. Accordingly, Leporini and Martin, taken singly or in combination, do not disclose, teach, or suggest the decoder module as claimed. Accordingly, claim 1 should be allowable over Leporini and Martin. The rejection of Leporini and Martin should therefore be withdrawn.

II.

Further, with respect to the decoder module as claimed, the receiver/decoder 2000, as relied on by the Examiner, clearly does not comprise:

- (1) a *second demultiplexer in electrical communication with said multimedia module* for receiving said digital multimedia data stream and for demultiplexing the digital multimedia data stream which includes a multiplexed plurality of compressively encoded digital multimedia data;
- (2) a decoding section for *decoding digital broadcasting data output from said broadcast receiving module and digital multimedia data output from said second demultiplexer*; and
- (3) wherein the digital broadcasting data is inputted to the decoding section via the conditional access section from the first demultiplexer and the digital multimedia data is inputted to the decoding section from the second demultiplexer.

Specifically, the decoding section as claimed is for decoding data from at least two different sources:

- digital broadcasting data output from said broadcast receiving module; and
- digital multimedia data output from said second demultiplexer (resulting from demultiplexing non-decrypted data stream received from a multimedia module).

The receiver/decoder 2000 of Leporini, as a module, simply does not include such a decoding section. More specifically, the MPEG video decoder 2028, which is the only decoding section disposed in the receiver/decoder 2000, is disclosed as decoding only data outputted from descrambler/demux/remux 2010, which is a single data source, but is not disclosed as decoding data from two different sources and of different nature, such as decrypted broadcasting data output from a broadcast receiving module and non-decrypted digital multimedia data received from a multimedia module, as is the case for the decoding section as claimed.

Conceivably, with receiver/decoder 2000 of Leporini, if a need arises for decoding non-decrypted multimedia data, a different decoder would need to be *added* for decoding non-decrypted multimedia data. By contrast, with the hybrid broadcasting receiver as claimed, there is *no need* for including a different decoder, since the same decoding section as claimed is also used for decoding non-decrypted multimedia data.

Accordingly, Leporini does not disclose, teach, or suggest the decoding section as claimed.

Further, with respect to the *second demultiplexer* as claimed, the second multiplexer as claimed is of the following features:

- being in electrical communication with said multimedia module for receiving said digital multimedia data stream and for demultiplexing a

digital multimedia data stream which includes a multiplexed plurality of compressively encoded digital multimedia data; and

- its outputted digital multimedia data being inputted to the decoding section *along with digital broadcasting data inputted via the conditional access section from the first demultiplexer.*

Therefore, the second demultiplexer works in concert with the first multiplexer in allowing the decoding section to decode both decrypted broadcasting data output from said broadcast receiving module and non-decrypted digital multimedia data received from a multimedia module.

Hence, it should be clear that any prior art reference that does not disclose this “working-in-concert” relationship between two demultiplexers does not disclose or suggest the second demultiplexer as claimed.

On the other hand, only one demultiplexer (namely descrambler/demux/remux 2010) is disclosed in the receiver/decoder 2000 of Leporini. To be more specific, the receiver/decoder 2000 shown in Fig. 4 of Leporini does not separately comprise a broadcast receiving module and a decoder module. As such, the receiver of Leporini *does not really need* two demultiplexers.

By contrast, as for the claimed hybrid digital broadcasting receiver, a broadcast receiving module and a decoder module are separately provided, while the decoder module is operated independently of the broadcasting receiving module. As such, *two demultiplexers are included*, with the first demultiplexer for demultiplexing demodulated broadcasting data, and the second demultiplexer for demultiplexing non-decrypted multimedia data.

Accordingly, unlike the claimed hybrid digital broadcasting receiver, the receiver/decoder 2000 of Leporini does not have *two demultiplexers*, much less the above-noted “working-in-concert” relationship between two demultiplexers as

required for the disclosure of the second demultiplexer as claimed. Therefore, Leporini does not teach or suggest the second demultiplexer as claimed.

The above-noted distinctions between the receiver/decoder 2000 of Leporini and the claimed hybrid digital broadcasting receiver *in connection with the second demultiplexer as claimed* are also evident from another perspective. Specifically, the demultiplexer(2010) in Fig. 4 of Leporini appears to correspond to the first demultiplexer as claimed, which is for demultiplexing a demodulated digital broadcasting data stream, and selecting and extracting digital broadcasting data corresponding to a program selected by a user, since the demultiplexer(2010) in Fig. 4 of Leporini is disclosed as performing similar operations to those of the first demultiplexer as claimed. By contrast, the second demultiplexer as claimed demultiplexes non-decrypted digital multimedia data stream, rather than demodulated broadcasting data, and thus is different from the first demultiplexer as claimed as far as the source and the nature of data received for demultiplexing is concerned. Accordingly, also from this perspective, the second demultiplexer as claimed is quite different the demultiplexer (2010) in Fig. 4 of Leporini, and therefore Leporini does not teach or suggest the second demultiplexer as claimed.

On the other hand, Martin is devoid of any disclosure or suggestion of a decoding section that decodes both decrypted broadcasting data output from a broadcast receiving module and non-decrypted digital multimedia data received from a multimedia module, as is the case for the decoding section as claimed. Further, Martin also does not disclose a second demultiplexer where the second demultiplexer works in concert with a first demultiplexer in allowing a decoding section to decode both decrypted broadcasting data output from said broadcast receiving module and non-decrypted digital multimedia data received from a multimedia module, as is the case for the second demultiplexer as claimed.

The Examiner, nonetheless, alleges that Fig. 4B of Martin teaches “a PVR local storage for supplying the IRD to a digital content as a PVR content” and further

alleging that *"these contents are not decrypted"*. In those regards, referring to Fig. 4B and its description, Martin discloses that *"[T]hese cells, the visual objects and the underlying applications may be generated as a combination of headend content such as mosaic programs, stored content, and data (e.g., HTML content) and local content such as PVR content, graphics, and animation from a local storage device 420 (such as a hard-disk, optical disk, semiconductor memory, etc.) that is part of or coupled to STB 1140"*.

However, contrary to the Examiner's allegation, nowhere does the above-noted description of Fig. 4B of Martin disclose that PVR contents from a local storage device 420 are either not decrypted, or not subject to decryption before becoming decodable. In fact, it is quite clear the Martin's IRD 1140 ("Integrated Recorder Decoder" 1140 as shown in Fig. 3B and also referred to as STB 1140), by illustration of Fig. 3A, is of similar nature to the above-noted conventional DMB receiver. In particular, the decoder section of IRD 1140 (namely audio decoder 246 and video decoder 248) are only taking as input output from the demultiplexer/descrambler 240, which is subject to the control of conditional access 238 in order to enable encrypted broadcast signals to be descrambled. See col. 7, lines 45-54 of Martin. Therefore, Martin's decoder section disposed in IRD 1140 (STB 1140) is in fact no different from the decoder section disposed in the above-noted conventional DMB receiver in that neither decoder section can do the decoding independently of an conditional access section internal to their respective hosting devices.

Hence, with Fig. 4B, Martin does not disclose a decoding section that decodes both decrypted broadcasting data output from a broadcast receiving module and non-decrypted digital multimedia data received from a multimedia module, as is the case for the decoding section as claimed. Similarly, since Martin discloses only one demultiplexer resided in an STB 1140 (see Demultiplexer 240 of STB 1140 shown in Fig. 3A of Martin), Martin also does not disclose a second demultiplexer where the second demultiplexer works in concert with a first demultiplexer in allowing a

decoding section to decode both decrypted broadcasting data output from said broadcast receiving module and non-decrypted digital multimedia data received from a multimedia module, as is the case for the second demultiplexer as claimed.

Therefore, Martin does not cure the above-noted deficiencies of Leporini associated with the decoding section as claimed and the second demultiplexer as claimed.

Consequently, for at least the foregoing reasons, Leporini and Martin, taken singly or in combination, do not disclose, teach, or suggest the decoding section as claimed and the second demultiplexer as claimed.

III.

To summarize, first, at least due to the apparent disparities in modularity between Leporini as well as Martin and the hybrid digital broadcasting receiver as claimed, Leporini and Martin, taken singly or in combination, do not disclose, teach, or suggest the decoder module as claimed. Second, at least because Leporini and Martin, taken singly or in combination, do not disclose, teach, or suggest the decoding section as claimed and the second demultiplexer as claimed, Leporini and Martin, taken singly or in combination, do not disclose, teach, or suggest the decoder module as claimed.

Accordingly, claim 1 should be allowable over Leporini and Martin. The rejection of Leporini and Martin should therefore be withdrawn.

Claim 9

With respect to claim 9, although claim 9 does not recite a decoder module, claim 9 contains subject matter related to that of claim 1. In particular, claim 9 recites a second demultiplexer and a decoding section, each being respectively related to the second demultiplexer and the decoding section recited in claim 1. Accordingly, for at least the same reasons stated above in connection with the second demultiplexer and

the decoding section recited in claim 1, the rejection of claim 9 should also be withdrawn.

Claims 2-8 and 10-14

The rejection of claims 2-8 and 10-14 should be withdrawn at least by virtue of their dependency from claims 1 and 9 respectively.

III. Conclusion

In view of the above, it is believed that this application is in condition for allowance and notice to this effect is respectfully requested. Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the telephone number indicated below.

Should any/additional fees be required, the Director is hereby authorized to charge the fees to Deposit Account No. 18-2220.

Respectfully submitted,



Jundong Ma
Attorney for Applicants
Reg. No. 61,789

Roylance, Abrams, Berdo & Goodman, L.L.P.
1300 19th Street, N.W., Suite 600
Washington, D.C. 20036
(202) 659-9076

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